

CLAIMS

1. An electrical conductor coated in an insulating layer, itself coated in a bonding layer, the conductor being characterized in that said bonding layer is obtained from
5 a composition comprising a thermoplastic polymer and a settable resin.
2. An electrical conductor according to claim 1, characterized in that the settable resin is photocurable
10 or thermosettable.
3. An electrical conductor according to claim 1 or claim 2, characterized in that the thermoplastic polymer presents a glass transition temperature greater than or
15 equal to 150°C.
4. An electrical conductor according to any one of claims 1 to 3, characterized in that when the thermoplastic polymer is semicrystalline, the thermoplastic polymer
20 presents a melting temperature greater than or equal to 200°C.
5. An electrical conductor according to any one of claims 1 to 4, characterized in that the thermoplastic polymer
25 is at least partially soluble in the settable resin.
6. An electrical conductor according to any one of claims 1 to 5, characterized in that the thermoplastic polymer is selected from one or more of the following polymers:
30 polystyrenes; polyetheretherketones; polyetherimides; polyamides; polyolefins and copolymers of polyolefins; polysulfones; polyurethanes; polyesters; cyclic oligoesters; polyimides and copolymers of polyimides; polyphenylene ethers; polyphthalamides; vinyl
35 polychlorides; polyacrylics; polymethacrylates; and polycarbonates.

7. An electrical conductor according to any one of claims 1 to 6, characterized in that the settable resin is selected from epoxy resins, vinyl ester resins, unsaturated polyester resins, phenolic resins, alkyl
5 resins, acrylic resins, ester cyanates, and benzoxazines.

8. An electrical conductor according to any one of claims 1 to 7, characterized in that for a thermosettable resin, said composition includes at least one of the following
10 compounds: a curing compound that is chemically reactive with said settable resin, and a curing catalyst.

9. An electrical conductor according to claim 8, characterized in that the resin is thermosettable and is
15 an epoxy homopolymer and preferably a diglycidyl ether of bisphenol-A, and the setting compound is selected from amine compounds, carboxylic anhydrides, and polyamides.

10. An electrical conductor according to any one of
20 claims 1 to 9, characterized in that said composition contains 30% to 60% parts by weight of polyphenylene oxide and 70% to 40% parts by weight of a mixture containing diglycidyl ether of bisphenol-A and an amine selected from 4,4'-methylenebis-(2,6-diethyl) benzenamine
25 amine and 4,4'-methylenebis-(3-chloro-2,6-diethyl) benzenamine.

11. An electrical conductor according to any one of claims 1 to 6, characterized in that the settable resin
30 is a photocurable resin selected from one of the following resins: acrylate resins; methacrylate resins; epoxy resins; and vinyl ethers.

12. An electrical conductor according to any one of
35 claims 1 to 6, characterized in that for a photocurable resin, the composition includes a photoinitiator.

13. A method of manufacturing an electrical conductor (1,
2) coated with a bonding layer (4) according to any one
of claims 1 to 12, the method being characterized in that
it comprises applying said composition on said electrical
5 conductor coated in said insulating layer, and applying
treatment to cause said settable resin to be cured at
least in part.

14. A method according to claim 13, characterized in that
10 the curing treatment is selected from at least one of the
following treatments: heat treatment, ultraviolet type
radiation.